



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,315	03/31/2004	Mark A. Boerger	CM05922J	5177
7590 MOTOROLA, INC. 8000 West Sunrise Boulevard Room 1610 Plantation, FL 33322-9947				
			EXAMINER	
			DOAN, TRANG T	
			ART UNIT	PAPER NUMBER
			2431	
			MAIL DATE	DELIVERY MODE
			09/14/2010 PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/814,315

Applicant(s)

BOERGER, MARK A.

Examiner

TRANG DOAN

Art Unit

2431

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. This action is in response to the amendment filed on 06/23/2010.
2. Claims 1-13 are pending for consideration.

Response to Arguments

3. Applicant submitted new drawings, therefore the objection to figure 1 has been withdrawn.
4. Applicant's arguments filed on 06/23/2010 have been fully considered but they are not persuasive.

Applicant argues on pages 6-7 of the Remarks that Anderson in view of Shona does not disclose wherein the drive application operates to communicate key command information to the KVL without the use of a timer peripheral and enable the UART peripheral to utilize parity error information to validate communication with the KVL. Examiner respectfully disagrees with applicant's arguments. Shona reference discloses asynchronous communication which means the communication between two devices does not need to use a timer (Anderson: see Abstract: UART and Shona: column 3 lines 26-34). Anderson does not disclose using parity error information to validate communication between the KVL and UART. However, Shona discloses using parity error information to validate communication between two devices (column 5 lines 21-38). Therefore, it would have been obvious to a person skilled art at the time the invention was made to have included in Anderson the feature of Shona as discussed above to detect error between communications.

Applicant further argues on page 7 of the Remarks that Anderson does not disclose transmitting a fourth detection signal from the UART to a KVL link layer application for sending subsequent data until all data has been transmitted by the UART. Examiner respectfully disagrees with applicant's arguments. Anderson does disclose multiple transmission stages (i.e., more than one stage) for sending subsequent data until all data has been transmitted (Anderson: see figure 12: repeat till all KMMs are delivered and paragraph 0084). Therefore, the multiple transmission stages can have a four transmission stage as a fourth detection signal recited in claim 9.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US 20020018571) (hereinafter Anderson) in view of Shona (US 5790885) (hereinafter Shona).

Regarding claim 1, Anderson et al discloses an encryption key interface system comprising: a universal asynchronous receiver transmitter (UART) peripheral for communicating with a key variable loader (KVL) through at least one communications

link (Anderson: paragraph 0028: a key delivery device 101 connected to an encryption device 103); a driver application associated with the UART peripheral for receiving and transmitting commands to the KVL (Anderson: paragraph 0030: The KMF communicates information to the KVL identifying the various target units and identifying which messages are to be delivered to the target units; and paragraphs 0033-0034).

Anderson does not disclose wherein the driver application operates to communicate key command information to the KVL without the use of a timer peripheral and enables the UART peripheral to utilize parity error information to validate communication with the KVL. However, Shona discloses wherein the driver application operates to communicate key command information to the KVL without the use of a timer peripheral and enables the UART peripheral to utilize parity error information to validate communication with the KVL (Shona: column 3, lines 26-34: Examiner notes, asynchronous communication is transmission of data without the use of a clock and column 5, lines 21-38: if both parity bits are not matched with each other as a result of collision). Therefore, it would have been obvious to a person skilled art at the time the invention was made to have included in Anderson the feature of Shona as discussed above because the error recovery of the T=0 protocol is implemented merely by detecting the parity error and the extension character in FIG. 9, the method of detecting the framing error in the first embodiment may be used together with the above mentioned error recovery (Shona: column 10, lines 6-10).

Regarding claim 2, Anderson in view of Shona further discloses comprising: a key management application for communication with the driver application for managing the key management information (Anderson: paragraph 0029).

Regarding claim 3, Anderson in view of Shona further discloses comprising: a general purpose input output (GPIO) peripheral for communicating with the KVL to detect when the KVL is connected with the interface (Anderson: paragraph 0063: one of the opcodes is detected while a KVL is attempting to establish a communications link with a target).

Regarding claim 4, Anderson in view of Shona further discloses comprising: a KVL detection application for managing operation of the GPIO peripheral (Anderson: paragraph 0030).

Regarding claim 5, Anderson in view of Shona further discloses wherein the UART peripheral and the GPIO peripheral communicate with the KVL over separate data links (Anderson: paragraph 0030; and paragraph 0047).

Regarding claim 6, Anderson discloses a universal asynchronous receiver transmitter (UART) peripheral for transmitting and receiving key commands from the KVL (Anderson: paragraph 0028: a key delivery device 101 connected to an encryption device 103); a KVL driver application for communicating command information to the

UART peripheral (Anderson: paragraph 0030: The KMF communicates information to the KVL identifying the various target units and identifying which messages are to be delivered to the target units; and paragraphs 0033-0034); a KVL management application operating with the KVL driver application for interpreting key command data from the KVL (Anderson: paragraph 0045: KVL operator initiates a transfer of key management messages by entering the proper commands into the KVL 401).

Anderson does not disclose wherein the KVL driver operates without a timer peripheral enabling the UART peripheral to utilize parity error information to validate communication with the KVL. However, Shona discloses wherein the KVL driver operates without a timer peripheral enabling the UART peripheral to utilize parity error information to validate communication with the KVL (Shona: column 3, lines 26-34: Examiner notes, asynchronous communication is transmission of data without the use of a clock and column 5, lines 21-38: if both parity bits are not matched with each other as a result of collation). Therefore, it would have been obvious to a person skilled art at the time the invention was made to have included in Anderson the feature of Shona as discussed above because the error recovery of the T=0 protocol is implemented merely by detecting the parity error and the extension character in FIG. 9, the method of detecting the framing error in the first embodiment may be used together with the above mentioned error recovery (Shona: column 10, lines 6-10).

Regarding claim 7, Anderson in view of Shona further discloses comprising: a general purpose input output peripheral operating with a KVL detection application for

detecting when a KVL is initiating communication with the electronic device (Anderson: paragraph 0063).

Regarding claim 8, Anderson in view of Shona further discloses wherein the UART peripheral and GPIO peripheral communicate with the KVL over separate communications links (Anderson: paragraph 0030; and paragraph 0047).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson et al. (US 2002/0018571) (hereinafter Anderson).

Regarding claim 9, Anderson discloses a method for using an encryption key interface for communicating key encryption information from a variable key loader (KVL) to an electronic device comprising the steps of: detecting a first detection signal at a universal asynchronous receiver transmitter (UART) within the electronic device (Anderson: see figure 1); transmitting data from the KVL to the UART (Anderson: paragraph 0061: KVL can send a series of operation-codes "opcodes" to the target to accomplish a desired task); transmitting a second detection signal from the UART to a

KVL application when the UART detects a receive data byte (Anderson: paragraph 0062); transmitting a third detection signal from the UART to the KVL application indicating all data has been received (Anderson: paragraphs 0062-0063; and paragraph 0084); and transmitting a fourth detection signal from the UART to a KVL link layer application for sending subsequent data until all data has been transmitted by the UART (Anderson: paragraph 0062; disconnect indicates the transfer is complete and is being terminated; paragraph 0072; and paragraph 0084).

Regarding claim 10, Anderson further discloses wherein the first detection signal is a break detect indicating a unique KVL signature (Anderson: paragraph 0036: first connecting the KVL to an encryption unit).

Regarding claim 11, Anderson further discloses wherein the second detection signal is a receive data interrupt command indicating to the UART that data has been transmitted from the KVL (Anderson: paragraphs 0039-0040; and paragraph 0083).

Regarding claim 12, Anderson further discloses wherein the third detection signal is idle pattern detect indicating a predetermined number of idle byte times have been received by the UART (Anderson: paragraph 0061; paragraph 0070; and paragraph 0081).

Regarding claim 13, Anderson further discloses wherein the fourth detection signal is idle pattern detect indicating to continue transmitting another byte in the response message (Anderson: paragraph 0083: KVL transfers all the KMMs it has for the target, it sends a TRANSFER COMPLETE frame 1230 to indicate it has no more KMMs for the target).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRANG DOAN whose telephone number is (571)272-0740. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Trang Doan/
Examiner, Art Unit 2431

/Kaveh Abrishamkar/
Primary Examiner, Art Unit 2431